



Fact Sheet

US Army Corps of Engineers
U.S. Army Engineer Research and Development Center

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Prado Spillway

Purpose: To develop a spillway discharge rating curve and to evaluate current directions and velocities, and wave and surge magnitudes. It was also used to assess scour and deposition in the tailrace.

Background: The Prado Dam is located about 40 miles southeast of Los Angeles on the Santa Ana River, about 30 river miles from the Pacific Ocean. The dam was completed in 1941 and controls runoff from a drainage area of 2255 square miles. It creates a flood control reservoir that stores water only during storm events and is used at a limited capacity for water conservation.

The spillway consists of a concrete ogee crest, a spillway channel, a steep chute and a flip bucket. The ogee structure is 13-ft high with a crest at el 543 and a width of 1000-ft. The 1147-ft spillway channel conveys flow from the spillway crest to the spillway chute. The width of the spillway channel is 1000-ft at the axis of the ogee crest and narrows to 660-ft at the beginning of the chute. The chute is 190-ft long.



Facts: At the request of the U.S. Army Engineer District, Los Angeles, a 1:50 scale physical model was designed and constructed at the U.S. Army Engineer Research and Development Center by the Coastal and Hydraulics Laboratory. The model reproduces the spillway crest, spillway channel, spillway chute and flip bucket. The model permitted evaluation and modification to the spillway approach channel, spillway abutments, weir crest, spillway chute and scour protection.

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